

FUJR 10.748 (100794-09745)
09/086,268In the Claims:

Please amend the claims as follows:

1. (currently amended) A transmission system for controlling the transmission of a concatenation signal via a path, the system comprising:

a sending apparatus including:

signal dividing means for dividing the concatenation signal to generate a plurality of divided signals which are pseudo concatenation signals having a SONET or SDH multiplexed interface, the bit rate of which is lower than that of the original concatenation signal, according to a bit rate available for a transmission line, wherein a respective bit rate of one of the divided signals differs from that of another of the divided signals;

guarantee information adding means for adding guarantee information, for guaranteeing the continuity of the divided signals, to each of the divided signals to generate transmission signals; and

signal sending means for sending the transmission signals to one address, in parallel via a plurality of transmission on which the bit rate is limited; and

a receiving apparatus including:

signal receiving means for receiving the transmission signals; and

signal restoring means for restoring the original concatenation signal by constructing the divided signals on the basis of the guarantee information.

2. (Previously Presented) The transmission system according to claim 1, wherein the guarantee information adding means adds at least one of the information regarding the type of the concatenation signal, the frame number of the concatenation signal, and a division number at the time of dividing the concatenation signal to the divided signal as the guarantee information.

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3. (Previously Presented) The transmission system according to claim 1, wherein the guarantee information adding means add the guarantee information in empty bytes of a path overhead for the divided signal.
4. (Previously Presented) The transmission system according to claim 1, wherein the receiving apparatus further includes delay information notifying means for giving the sending apparatus delay information regarding delays which have occurred at the time of receiving the transmission signals.
5. (Previously Presented) The transmission system according to claim 4, wherein on the basis of the delay information, the signal sending means sets the bit rate of each transmission signal variable and makes delay correction.
6. (Previously Presented) The transmission system according to claim 4, wherein the signal sending means overlaps portions of the transmission signals and send the transmission signals.
7. (Previously Presented) The transmission system according to claim 6, wherein the signal receiving means receives the transmission signals, the signal receiving means makes delay correction by making use of an overlap.
8. (Currently Amended)) A sending apparatus for controlling the sending of a concatenation signal via a path, the apparatus comprising:
 - signal dividing means for dividing the concatenation signal to generate a plurality of divided signals which are pseudo concatenation signals having a SONET or SDH multiplexed

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interface the bit rate of which is lower than that of the original concatenation signal, according to

a bit rate available for a transmission line, wherein a respective bit rate of one of the divided signals differs from that of another of the divided signals;

guarantee information adding means for adding guarantee information, for guaranteeing the continuity of the divided signals, to each of the divided signals to generate transmission signals; and

signal sending means for sending the transmission signals to one address, in parallel via a plurality of transmission lines on which the bit rate is limited.

9. (Currently Amended) A receiving apparatus for controlling the receiving of a concatenation signal via a path, the apparatus comprising:

signal receiving means for receiving transmission signals consisting of divided signals generated by dividing the concatenation signal, being sent to one address, in parallel via a plurality of transmission lines on which the bit rate is limited, said divided signals being pseudo concatenation signals having a SONET or SDH multiplexed interface the bit rate of which is lower than that of the original concatenation signal and generated according to a bit rate available for a transmission line, wherein a respective bit rate of one of the divided signals differs from that of another of the divided signals; and

signal restoring means for restoring the original concatenation signal by constructing the divided signals on the basis of guarantee information, for guaranteeing the continuity of the divided signals, included in the divided signals.

10. (withdrawn) A transmission system for controlling the transmission of a multiplexed signal via a section, the system comprising:

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a sending apparatus including:

signal dividing means for dividing the multiplexed signal to generate a plurality of divided signals in the STS or STM transmission interface format;

guarantee information adding means for adding guarantee information for guaranteeing the continuity of the divided signals to each of the divided signals; and

WDM signal sending means for converting the divided signals to which the guarantee information is added to optical signals with wavelengths different from one another to perform wavelength multiplexing on the optical signals and sending the optical signals; and

a receiving apparatus including:

WDM signal receiving means for receiving the optical signals, separating the optical signals according to wavelengths, and converting the optical signals to the divided signals; and

signal restoring means for constructing the divided signals on the basis of the guarantee information to restore the multiplexed signal.

11. (withdrawn) The transmission system according to claim 10, wherein the guarantee information adding means adds at least one of information regarding the type of the multiplexed signal, the frame number of the multiplexed signal, the frame number of the multiplexed signal, and a division number at the time of dividing the multiplexed signal to the divided signal as the guarantee information.

12. (withdrawn) The transmission system according to claim 10, wherein the guarantee information adding means adds the guarantee information in byte C1 of a relay section overhead for the divided signal.

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13. (withdrawn) A sending apparatus for controlling the sending of a signal via a section, the apparatus comprising:

signal dividing means for dividing a multiplexed signal to generate a plurality of divided signals in the STS or STM transmission interface format;

guarantee information adding means for adding guarantee information for guaranteeing the continuity of the divided signals to each of the divided signals; and

WDM signal sending means for converting the divided signals to which the guarantee information is added to optical signals with wavelengths different from one another to perform wavelength multiplexing on the optical signals and sending the optical signals.

14. (withdrawn) A receiving apparatus for controlling the receiving of a signal via a section, the apparatus comprising:

WDM signal receiving means for receiving wavelength-multiplexed optical signals, separating the optical signals according to wavelengths, and converting the optical signals to divided signals generated by dividing a multiplexed signal; and

signal restoring means for restoring the multiplexed signal by constructing the divided signals on the basis of the guarantee information for guaranteeing the continuity of the divided signals included in the divided signals.

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FAX NO. 703 838 7758

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In the Drawings:

None